Transcribing Errors in Insulin Prescription

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Introduction

- Insulin is a commonly prescribed medication for the treatment of Diabetes Mellitus.
- 2.8 million people in the UK have been diagnosed with diabetes. 10% of these patients have type 1 diabetes, all of whom receive insulin therapy.[1] A significant number of type 2 diabetics are also prescribed insulin.
- Errors in the delivery of insulin are likely to cause harm due to its narrow therapeutic range.[2]
- Despite the dangers associated with errors in insulin administration, dosing is commonly incorrect.
- The National Patient Safety Agency received 3,881 wrong dose insulin reports between 2003 and 2009. This included one death due to a 10 fold dosing error.[3]

Aim

To investigate the incidence of transcribing errors in the prescription of insulin by clinicians in secondary care diabetes clinics at University Hospitals Birmingham.

Methods

- The medical records of 97 patients attending diabetes clinics between 27th January 2011 and 10th March 2011 were analysed.
- Patients not receiving insulin therapy were excluded, leaving 80 patients.
- The age, gender and number, type and dose of insulin were recorded from the clinic notes.
- At a later date, the Diabetes Clinic letters were analysed using the online computer system *Clinical Portal* and the insulin details recorded was compared to what was originally written in the clinic notes.
- Any discrepancies between the dose prescribed by the clinician and the dose recorded in the letter were noted.

Results

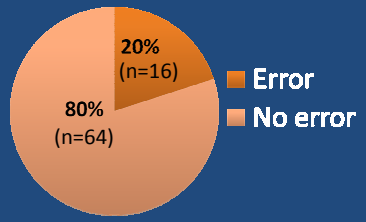

Figure 1: Proportion of transcribing errors in patients on Insulin.

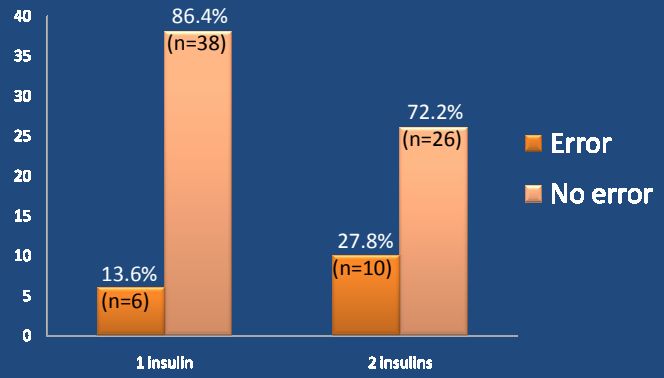

Figure 2: Quantity of errors increases with double insulin therapy.

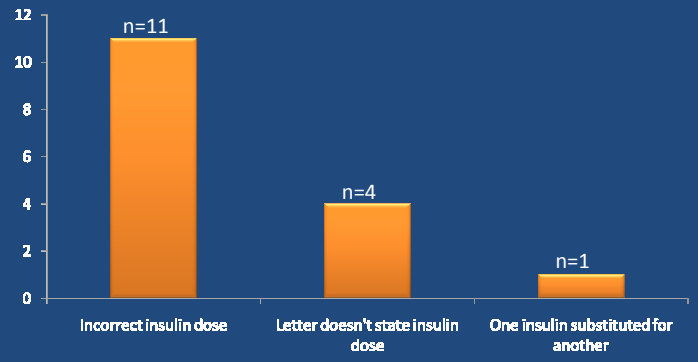

Figure 3: Incorrect insulin doses are the commonest form of error.

Conclusions

- Transcribing errors occurred in 20% of insulin prescriptions in our study sample.
- Transcribing errors are twice as common in patients on double insulin therapy.

Recommendations

- Greater care needs to be taken when dictating letters to avoid insulin errors (see figure 4)
- Particular care needs to be taken with commonly confused digits such as 16 and 60.
- Special attention should be taken with patients on multiple insulin therapy.
- Letters should be thoroughly checked before being sent to the patient's GP.

7-9 units of NovoRapid transcribed to 79 units.
14 units of Humalog Mix 50 transcribed to 40 units.
16 units of Glargine transcribed to 160 units.
NovoRapid replaced by Humalog.

Figure 4: Examples of errors

Limitations

This study only examines the incidence of errors in letters sent to patients' General Practitioners. It does not investigate whether these errors translate into the patient administering the incorrect dose.

References

1.Diabetes in the UK 2010: Key statistics on diabetes. Diabetes UK 2010 [PDF: accessed on 23/03/2011]

2.Lamont T, Cousins D, Hillson R et al. Safer administration of insulin: summary of a safety report from the National Patient Safety Agency. BMJ 2010 341:c5269; doi:10.1136/bmj.c5269

3.NPSA Rapid Response Report – Safer Administration of Insulin. 16 June 2010 [PDF: accessed on 23/03/2011]

http://BirminghamDiabetesHealthcare.com/